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(54) Title: ELECTROLYTE MEMBRANE OF SILOXANE-BASED POLYMER AND SOLID POLYMER FUEL CELL UTILIZ-
ING THE SAME

(57) Abstract: An electrolyte membrane made of a phosphate-containing siloxane-based polymer for fuel cell, where the polymer comprises a siloxane backbone and a poly(meth)acrylate chain to which phosphate groups are attached, and the polymer is formed by vinyl polymerization of a silane compound having a (meth)acrylate functional group or a hydrolysis-polycondensation product thereof and a (meth)acrylate compound having a phosphate group, followed by siloxane crosslinking. The electrolyte membrane of a siloxane-based polymer has a high conductivity for a fuel cell.